FIRE SAFETY AND BURN PREVENTION

Electricity – a potential fire hazard

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It's hard to imagine living without electricity. We use electricity in our lives for all sorts of things and in all sorts of ways. Homes today are brimming with state of the art technology, entertainment and computer equipment.

Electricity is a source of power and one of our most widely used forms of energy. Every day we use electricity to do many jobs for us - from lighting, heating and cooling our homes, to powering our televisions and computers.

However, as important as electricity is in our everyday lives, electricity can be a dangerous source of fire. Potential electrical fire hazards are everywhere. A build up of dust, trash and spider webs is an invitation for fire to start in the electrical system - something a bit of good housekeeping can greatly reduce the odds of happening.

Some electrical fires are caused by electrical system failures and appliance defects, but many more are caused by the misuse and poor maintenance of electrical appliances, bad wiring and overloaded circuits and extension cords.

Electrical fires occur more often during the winter months. People spend more time indoors during the winter months which requires an increase in the use of lighting, heating and appliances.

There are many simple steps that can help prevent the start of an electrical fire, such as:

- Use electrical extension cords wisely and don't overload them. Make sure they are not frayed or worn and never run them under a rug.
- Avoid overloading outlets. Plug only one high-wattage appliance into each receptacle outlet at a time.
- If outlets or switches feel warm, shut off the circuit and have them checked by an electrician.
- Place lamps on level surfaces, away from things that can burn. Lightbulbs should never exceed the wattage marked on the lamp or fixture.
- Replace or repair loose or frayed cords on all electrical devices.
- When buying electrical appliances look for products which meet the Underwriter's Laboratory (UL) standards for safety.
- Never connect one multi-plug outlet to a second one.
- Never use water to put out an electrical fire.

Finally, make sure you have a working smoke alarm and practice a home escape plan with your family.

ACTIVITIES

- Make a list of ten items in your home that require the use of electricity. Write a fire prevention message for each of these items.
- Choose three different household appliances in your home. Find the UL safety label on each.
- Check out the electrical outlets in each room of your house. Did you find any of the outlets being used incorrectly? If so, how? Let an adult in the house know and have it fixed.

DID YOU KNOW?

- "Failure to clean" is the leading factor contributing to clothes dryer fires.
- Clothes, curtains and other potentially combustible items should be kept at least three feet from all heaters.
- All electrical appliances should be kept away from wet floors and counters. Pay special care to electrical appliances in the bathroom and kitchen.
- Most electrical fires result from problems with "fixed wiring" such as faulty electrical outlets and old wiring. In urban areas, 33% of residential electrical fires are due to faulty wiring.

Source: *usfa.fema.gov*

FIRE SAFETY QUIZ:

1. What is the leading cause of home fires during the winter months?
   a. heating equipment
   b. holiday lights
   c. cooking
2. Never use water to put out an electrical fire.
   a. True B. False
3. Turn off the clothes dryer at home:
   a. if you plan to be gone 15 minutes or more.
   b. if you plan to be gone an hour or more.
   c. always no matter how long you are gone.
4. Most fires caused by children start in the:
   a. kitchen.
   b. garage.
   c. bedroom.
5. The third prong of a three prong plug is to:

   a. give the plug extra support when plugged in.
   b. properly ground the plug, minimizing fire and shock.
   c. fill the space in an outlet.
6. What is the main reason that smoke alarms fail?
   a. missing batteries
   b. dead batteries
   c. all of the above
7. What percentage of households have actually developed and practiced a home fire escape plan?
   a. 10 percent
   b. 23 percent
   c. 45 percent
8. Which of these is the leading cause of home fire deaths?
   a. smoking
   b. cooking fires
   c. electrical fires
9. Which of these is the first material that starts to burn in a fire caused by smoking?
   a. upholstered furniture
   b. bedding
   c. mattress
   d. B and C
10. How many fires start in the kitchen?
    a. 1 in 10
    b. 3 in 10
    c. 5 in 10

Answers: 1. A, 2. A, 3. C, 4. C, 5. B, 6. C, 7. B, 8. A, 9. D, 10. B

FIRE SAFETY VOCABULARY

- **AMPS** - a base unit of electrical current, (ampere).
- **combustible** - capable of catching fire and burning.
- **emergency** - an urgent unexpected event that requires immediate action.
- **extension cord** - an electrical cord with a plug at one end and multiple jacks or outlets at the other end.
- **gauge** -a standard of measure or measurement.
- **smoldering** - to burn with little smoke and no flame.

Use extension cords safely

Most electrical fires can be prevented. Below are some electrical safety rules you should follow.

Power strips and surge suppressors don't provide more power, just more access to the same limited capacity of the circuit to which it is connected. Not all power strips are surge suppressors. In the event of a large surge or spike, the surge suppressor is a one-time-use protector and will likely need to be replaced.

Extension cords are only for temporary use. Most cannot carry as much current as permanent wiring and tend to overheat. Overheating can occur at the plug, at the socket or over the entire length of the cord. They come in a variety of wire sizes known as gauges. The most common are 18, 16, 14, 12 and 10. The lower the gauge, the more electrical current (amps) the wire can carry. A 12-gauge wire is heavier than 16-gauge wire. You would want to use a 16-gauge wire extension cord for a table lamp and a heavy duty extension cord of 12-gauge wire to run power tools such as a circular saw.

NEVER, use an extension cord, regardless of the gauge, with large current appliances

such as a refrigerator freezer, air conditioner, clothes dryer or space heater. These large current appliances generate increased heat in the cord, causing it to overheat, melt or ignite.

Source: *nyc.gov/fdny*

Types of Extension Cords	Gauge	Amps	Watts	Volts
Lightweight (lamp, radio)	18	7	875	125
Medium use (small equipment)	16	13	1625	125
Heavy Duty (computer, printer)	14	15	1825	125
Heavy Duty (power tools)	12	20	5000	220

ACTIVITY: DO THE MATH!

To determine if an extension cord is properly rated for the number and type of devices being plugged in, add the total wattage of each bulb or appliance and then divide by 120 to calculate the total number of amps. If the total number of amps is equal to or greater than the maximum rating of the cord, you must use a higher rated extension cord.

- With your family, use the above formula as you check out each of the extension cords in use at home and change out any extension cords that are not correct.

Fire prevention message

Understanding the importance of fire safety and burn prevention is a message everyone, young and old, should observe.

Each Monday in October, this page will focus on fire safety and burn prevention information sponsored by the Illinois Fire Safety Alliance. Thousands of students throughout Illinois will learn more about how to prevent a fire from occurring.

Fire deaths and injuries can be prevented.

For information on IFSA's Juvenile Fire Setter Intervention Program, contact: www.ifsa.org. email: jfsi@ifsa.org Helpline: (847) 400-4864